REMARKS/ARGUMENTS

This amendment is submitted in response to the Office Action dated August 17, 2010. After entry of this amendment, claims 5-26, 33-38, 40-41, 43-50, 52 and 53 will continue to be pending in the application. Claims 1-4, 28-32, 39, 42 and 51 have been cancelled. Claim 27 was previously cancelled. Claims 5, 10-17, 19, 21, 22, 33-38, 40, 43, 44, 46, 47, 48, 50, 52 and 53 have been amended. Amendments to the claims have been made to correct dependency, improve clarity and advance prosecution. Support for claim amendments made may be found on page 9, lines 19-27.

Reconsideration and allowance is respectfully requested in view of the remarks made below.

1.   Claim Objections

Claim 50 stands objected to because claim 50 recites, "The method according to any one of claims 27-49." In response, Applicant has amended claim 50 to correct the error made with respect to dependency. Furthermore, the dependency has been corrected in order to address additional changes made to the claims.

Applicant respectfully submits that the amended claim overcomes the objection and requests notice to that effect.

2.   The Specification

The Specification has been objected to because it contains an embedded hyperlink. In response, Applicant has amended the specification to remove the embedded hyperlink. Applicant respectfully submits that the amendment overcomes the objection and requests notice to that effect.

3.   **The Rejection under 35 U.S.C. §101**

Claims 28-50 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. The rejection of claims 28-32, 39 and 42 has been rendered moot since those claims have been cancelled.

The Office Action asserts that claims 28-50 are not patent eligible because the claims merely recite mathematical concepts without the recitation of a machine in which to perform such steps or without the recitation of an actual transformation of the data to a different state or thing.

Claims 37 and 41, which are now independent claims, have been amended to recite, "A method for analyzing a set of indexed data from a collection of spectra obtained via mass spectrometry...". Applicant respectfully submits that the amended claims 37 and 41 are directed to statutory subject matter since the claim language is directed towards a particular machine and method.

Claims 33-36, 38, 40 and 43-50 are also in condition for allowance by virtue of their dependence upon an allowable base claim. Notice to that effect is respectfully requested.

4.   **The Rejection under 35 U.S.C. §112**

Claims 1-26 and 28-53 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The rejection of claims 1-4, 28-32, 39, 42 and 51 has been rendered moot since those claims have been cancelled.

Claims 1 and 28 recited "based on the ensemble statistics of the set of indexed data." The Office Action indicates that it is unclear as to what about the ensemble statistic the "identifying" and "removing" portions of the set are based.   In response, Applicant has cancelled the offending language in claims 5-26, which contain the language of now cancelled claim 1 and in claims 33-38, 40, 41, 43-50, which contain the language of now cancelled 28. Applicant respectfully submits that the amended claims are now definite and requests notice to that effect.

Claims 1, 22, 28 and 51 recite "ensemble statistics" without clarifying what the statistics are that define "ensemble". In claims 5-21, 33-38, 40, 41, and 43-50 reference to "ensemble

statistic" has been removed. Therefore, the issues related to indefiniteness and the offending language have been overcome.

Applicant notes however that the notion of "ensemble statistics" is used in the Applied Statistics literature, especially in the context of Ergodic Random Processes when the ensemble statistics can be derived from temporal statistics (see for example de Sa 2003, p. 8)[1]. The notion of ensemble statistics is used in books that span a large domain of topics, from information processing (Ulrych and Sacchi, Section 1.2)[2] to catalysis by metals and alloys (Ponec et al., page 394)[3]. Several authors use ensemble statistics to define ergodic processes and stationary processes, for example (Sage and White, p. 177)[4]: "A random process is called *ergodic* if the time statistics and the ensemble statistics of the process are identical. A random process is called *stationary* if its ensemble statistics are not functions of time." Applicant respectfully contends that the term "ensemble statistic" has an established mathematical meaning and that usage of the term should not prompt a rejection based upon indefiniteness. Regardless, Applicant has attempted to address this issue as best possible in the claims in order to provide clarification.

In claims 22-26, 52 and 53, claims were amended to define the ensemble statistic as a statistic taken from across a set of spectra. Support for this amendment may be found on page 9, lines 21-30. Applicant respectfully submits that these claims are now definite and that the rejection under 35 U.S.C. § 112 has been overcome.

5. The Rejection under 35 U.S.C. §102

Claims 1-9, 11, 17-21, 28-36, 28, 44, 45 and 48-50 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. 6,064,770 to Scarth et al. (hereinafter "Scarth"). Claim 51 is not mentioned in the preamble used in the Office Action, however it is mentioned in the body of

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[1] J.P. Marques de Sa: Applied Statistics using SPSS, STATISTICA, and MATLAB, Volume 1, Springer 2003.
[2] T.J. Ulrych and M.D. Sacchi: Information-based inversion and processing with applications, Elsevier 2005.
[3] Vladimir Ponec, Vladimír Ponec, Geoffrey Colin Bond: Catalysis by metals and alloys, Elsevier 1995.
[4] A.P. Sage: Optimum Systems Control (1st edition), Prentice Hall 1968.

the rejection and therefore Applicant treats this claim as having been rejected. The rejection of claims 1-4, 28-32, 39, 42 and 51 has been rendered moot since those claims have been cancelled.

Scarth is directed to a method for detecting events in data. See *Scarth*, col. 3, lines 33-35. The Office Action does not reject claims 10, 14, 37, 41, 52 and 53 using Scarth or any other piece of prior art. The limitations from the base claims from which they depended have been incorporated into each claim. All other issues related to claims 10, 14, 37, 41, 52 and 53 have been remedied by action of this amendment. The claims are therefore in condition for allowance and notice to that effect is respectfully requested.

6.   **Conclusion**

Applicant has made an earnest effort to place this application in condition for allowance. If the Examiner feels that a telephone interview would expedite prosecution of this patent application, he or she is respectfully invited to telephone the undersigned at 215-599-0600. Contact with the undersigned via electronic mail at takupstas@patentwise.com is hereby authorized[5] per MPEP 502.03.

Respectfully submitted,

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[5] Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file.